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THE·AMERICAN·JOVRNAL OF·PHOTOGRAPHY

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"Is Photography Art?"
Elbert Hubbard

Faking in Photography
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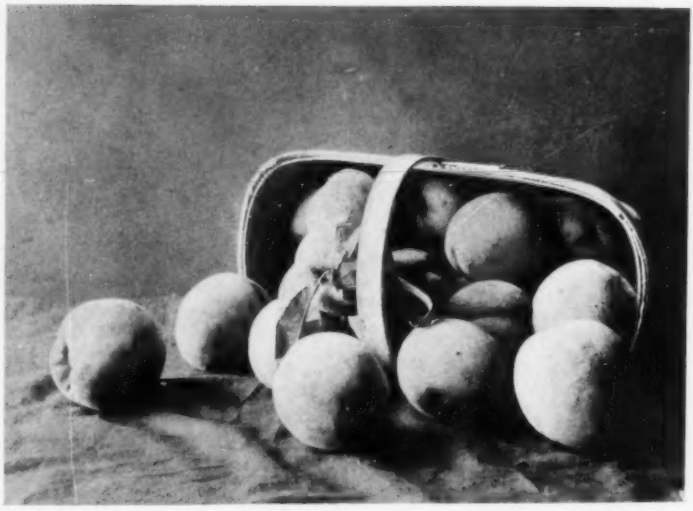

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MARGUERITES By C. Puyo.

SEP. 15 1902
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Vol. IX. No. 3. SEPTEMBER, 1902.

By C. Pyne.

National Convention of Photographers of America

THE Twenty-second Annual Convention of the Photographers' Association of America, was held at the Convention Hall, Buffalo, N. Y. August 5 to 8 inclusive, and was attended by Photographers from all over the Country. The exercises were opended by the President, Geo. M. Edmondson, of Cleveland, Ohio, who delivered the following address.

Since brevity is the soul of wit, I will be brief. Much can be said in little space, and in little space, I will endeavor to say it. The primary duty of the presidential address should be to indicate what has been done and what ought to be done — to indicate it merely, and no more, for the details should be left to the regular organization of the association. Photography is feeling the impulse of the progress of the times. Like all its sister sciences its march is steadily onward. There probably has never been in the history of the world such an impelling forward movement in the arts, in the sciences, in invention, and especially in industry and trade, as has marked the past decade; Photography's banner is in the van., and the future is fraught with interest. Photography has ceased to be a trade; it has become an art. So swiftly moving is the time in which we live that this revolution of Standard may be said to be the triumph of the past year. There has been a common contribution to this elevation of calling. It cannot be called the work of one man, or of any score of men; it is a process of refinement to which thousands have contributed. A certain few names are on every tongue but the credit is not to them, for their work is simply based upon the patient research and labor of thousands. They should have no mention in the impersonal presidential message. What a contrast is there between the crude and stilted photograph of even a few years ago and the artistic creation of today! In composition, in feeling, in depth and color some of the products of the camera have rivalled paintings.

Credit for this advance should be bestowed upon the National and State Associations, upon the splendid work of the photographic magazines, and upon the earnest students in operating dark rooms.

So great has been the progress of our art, for such do I regard it, that your committee appointed at the Detroit convention has been successful in its efforts to have photographs admitted to the art palace of the St. Louis World's Fair. Do not let us minimize the importance of this recognition. It is the first that has ever been accorded anywhere in the world. Photographs were admitted last year to the art exhibit at the International Exposition at Glasgow. It behooves us, therefore, as an association and as individuals, to see to it that every possible advantage is taken of this recognition of the Worlds' Fair Commissioners. Let us pledge ourselves now to assist in bringing together the finest exhibitions of photographs that the world has ever seen. Let American photography be forever fixed upon the pedestal of art by the character of its display in St. Louis in 1904. Its advantages will be incalcuable. It will give an impetus to the whole movement in photography; it will give photography definition and dignity in the history of American progress. I hold it to be one of the most important duties of the convention, assembled here to-day, to see that its World's Fair organization is made as strong as it possibly can be. National, State, and local associations should cooperate to this end. A definite plan of action should be conceived by this Association to radiate throughout the state and local organizations in order that the high tide of photography may be marked at St. Louis.

The State Associations have responded nobly to our request that they be officially represented by exhibits at the National. The good will and the evident desire on the part of these associations to assist us in making the convention successful prompts me to suggest a plan whereby the National and State Associations might work together to their mutual advantage. My plan is this: let the National Association hold its convention biennially; let the State Associations hold their conventions bi-ennially also, but in the alternate year. This method would effectually avoid any conflict in conventions. It would provide conventions each year, and it would make the National Convention doubly attractive, because it would permit every State Association to be represented by exhibits in it. The National Convention would then, indeed, be a national exhibit. Cannot the State Associations be induced to adopt the biennial plan? They would gain the wider advantage of a national display without interference with state plans.

The prosperous condition of our treasury suggest the idea that the Association might work a little along practical lines for the advancement of its art. We can well afford to publish six masterpieces of photographic art once or twice a year and furnish them to our members with such comment as may be necessary to show the trend of photographic development. It would keep the members fully in touch with what their associates were doing; and it would also inspire them to produce a bit of work that might be worthy of such circulation.

I deem it also advisable to suggest that it might be well if the executive committee were authorized to publish semiannually a journal of photographic art in the interest of the Photogers' Association of America, containing prints, timely criticism and information concerning the convention. As the journal would reach every member of the Association, to whom it would be sent free, it would unqes-

tionably have the support of the manufacturer for its advertising value, and would cost the Association no more than the present letter and circular work of the executive board.

Gentlemen, I thank you.

Following this, at the afternoon session, came an address by C. H. Smith of Rochester N. Y. on "The little things in business that mean success"—and an address by Lucius W. Hitchcock, of Buffalo, subject, "Practical Composition of One, Two and Three Figures."

Wednesday was Manufacturers' day and the list of manufacturing exhibits was as follows:The American Aristo Co.of Jamestown, T. B. Livingston & Co., Chicago, Ill., frames; E. B. Meyrowitz, photo supplies, New York; The Sprague & Hathaway Co., West Somerville, Mass., miniature enlargements; W. P. Buchanan, Phildelphia, Pa. flashlights supplies; B. E. Michelman, New York, portfolios; Calkins Scenic Co, Chicago, backgrounds; Carl Ernst & Co.. New York, photo mounts; C. P. Goerz, New York, manfg. opticians; Bausch & Lomb Optical Co, Rochester, lenses; Willis & Clements, Philadelphia, Pa., Mfrs. of Platinotype paper American Paper Goods Co., Kensington, Ct; Rotograph Co., New York, bromide and developing papers; Rochester Optical &Camera Co. cameras; Anthony & Scovill Co. New York, photo papers; R. L. Fitch, Jr., Three Rivers Mich., backgrounds; A. M. Collins Manfg. Co. Philadelphia, Pa., the Joe Di Nunzio Co, Angeloplatinum papers, Boston, James H. Smith & Co., Chicago, photo supplies and Savigny process; Golden Manfg. Co, Chicago, picture frames; M. A. Seed Dry Plate Co, Saint Louis, Mo., Southern Photo-Material Co. Atlanta, Ga.; H. Lieter Co., Indianapolis, Ind.; the Hammer Dry Plate Co., Saint Louis, Mo., The Ullman Manufacturing Co., New York, G. Cramer Dry Plate Co., Packard Bros., Boston, backgrounds; Taprell & Loomis, linofil stock; J. F. Adams, Buffalo, photographic supplies; M. M. Frye, New York, mounts; Eastman Kodak Co., Rochester, process for negative developing in daylight; Standard Plate Co , Quaker City Card Co., Philadelphia. W. Huermann, N. Y. Platinum papers, Ill. College of Photography, Rough and Caldwell, N. Y. Backgrounds, Ralph J. Golsen Chicago.

The exhibit as a whole was, perhaps, the best ever made by the Dealers and Manufacturers.

On Thursday, C. M. Hayes, of Detroit, spoke on "Good Business Methods for Photographers;" and William J. Edmonston, on "How to Make Good Groups; Elbert Hubbard of East Aurora N. Y. Editor of "The Philistine" and "Little Journeys," a striking personality, addressed the Convention on "Is Photography an Art" part of which we have reproduced elsewhere in this issue. Prof. O. W. Beck, New York, "Art Possibilities in Commercial Portrait Photography.

On Friday, Morris Burke Parkinson, of Boston, spoke on "The Idiosyncracies of the Customer," and a Word About Faking."

The Treasurers's report showed the finances of the association to be in a healthy condition. The Committee on Nominations reported, and the following officers were elected for 1902. Geo. Nussbanmer of Buffalo, N. Y. for President, H. J. Collings of Holyoke, Mass. First Vice President, Geo. Holway of Indianopolis Secretary, and F. J. Barrows of Boston, Treas.

In the art gallery were shown studies of the most famous portrait and landscape photographers of the country. Burr McIntosh sent a score of his most noted studies. Colonel Theodore C. Marceau has a collection of artistic female poses, exquisitely framed. Next to Marceau's exhibit were several heads by Morris Burke Parkinson of Boston. Other artistic exhibits were by Dudley Hoyt of Rochester, A. L. Jackson of Tacoma, L. A. Schumacher of Los Angeles, Cal., the Albany Art Union, George M. Edmondson of Cleveland, O., Frank R. Bill, Cleveland, O., F. Bateham of Norwalk, O., W. M. Hollinger of New York, J. L.Schriever of Scranton, Pa. D. D. Spellman of Detroit, Mich., F. R. Barrows of Boston, Mass., J. W. Field of Berlin, Wis., and C. W. Engel, Baltimore, Md. Miss Bertrand, of Torrington Ct. and many others.

THE WINDING BROOK.

The Photographic Possibilities of a Brook

ERNEST HAROLD BAYNES.

MANY and great are the photographic possiblities of a little brook. As children we have recognized this fact, for where is the child who would not be happy if permitted to spend his time without restraint, by a wadeable, fishable, damable stream? The variety of amusement is found to be inexhaustible. From the very earliest spring days when the muddy and foam-flecked waters whirl their toy boats to interesting destruction in the eddy beneath the leaning alder bushes, through the warm summer, when with shoes in hand and with knickerbockers rolled to the hips, they wade for fresh-water mussels, until the winter, when they track the mink beneath the shelving ice along the banks, that bit of a brook will hold the interest and love of all right-minded children, in the spell of its versatile companionship. But how many are there I wonder, who retain in later years, this strong child love ot the little stream? As we grow older we grow taller, and our eyes are further and further removed from the brook and its treasures. We no longer see distinctly the little creatures moving among the pebbles at the bottom, and no longer can we smell without stopping, the little wild flowers which grow along the bank. By reason of our increased height, we have become literally further removed from nature. We may even think, if we think of the matter at all, that we have outgrown our interest in the brook as we have outgrown our liking for marbles and tops, because the adoration of it belongs to the period of childhood. As a matter of fact, the brook holds as many charms for us as for the chil-

dren, if we could but get as near to it.

We have changed, indeed, but the brook in all its essential qualities is still the same.

"For men may come, and men may go,
"But I go on forever."

I have in mind a little stream, the type of hundreds to be found throughout New England, and I beg leave to introduce to it such of my readers as love brooks, or having loved them in childhood, desire to renew their love. Being interested in picture making, we had better take our cameras with us, for there are few localities which offer a greater variety of subjects interesting to the amateur photographer, than an average brook. What kind of a camera? Well one with a fairly long focus I should say, fitted with the fastest lens you can afford. I shall take a Tele-photo Poco myself, with a Goerz lens, series III No. 4. A fast lens will do all that a slow one can do, and a few other things besides, and it has been my experience that the plates and other materials wasted by the use of a poor instrument will soon account for enough money to have bought the best.

My little brook rises far away on a wooded hillside. There is a massive tree towering above a moss-covered rock, and between the gnarled roots of the tree and the stone there is a tiny pool of clear water. If you ever visit that pool dip your hand into it and even should it be midsummer you would find the water cold; it rises from a spring deep down below the rock. The rim of the pool is grass-grown and at the lowest point the water trickles over in a thin, silvery stream, which is presently lost amongst the overhanging fern fronds. We will not follow it now to the point at which it might first be called a brook; but by a woodland path we will reach it at a spot where a fallen tree forms a natural bridge by which we may cross to the opposite bank. Here, in the early spring, the alders shake their yellow catkins over the water, scattering the golden pollen in the stream. These flimsy tassels form a pleasing subject if properly taken, though I confess I have never taken them successfully myself. They should, I think, be photographed against the sky or the water, and with strong sunlight on one side of them. They must be taken with a shutter, as they dance with every breath of wind. Their color calls for isochromatic plates,

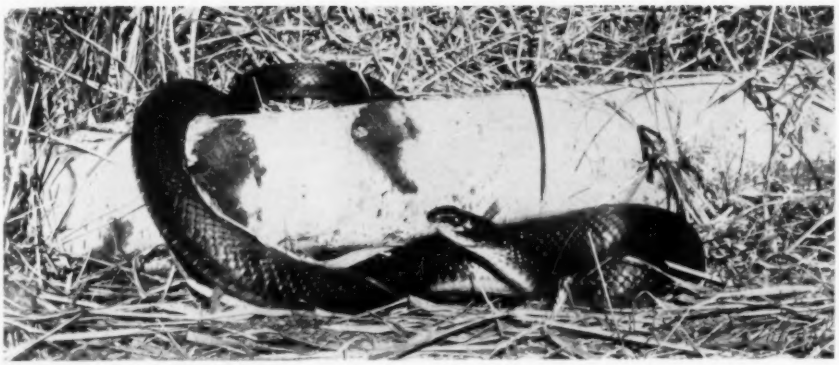
LEAST BITTERN'S NEST. By J. Bayer.

ALONG THE BANKS OF THE BROOK. By E. H. Baynes.

something I neglected to use. About this time too, the spears of the skunk cabbage and false helebore may be found along the bank, subjects, which, though modest, are characteristic of the early year, and filled with pleasant associations for those who have spent their childhood in the country.

Hello! there goes a beautiful subject now; that spotted turtle just disappearing under the bank. Hold my coat somebody and we'll try our luck with him. Now, he's not the easiest subject in the world, for in spite of the proverbial slowness of turtles, this one is kicking hard enough to spoil a dozen plates if we gave him the chance. His shell, you see, is black with yellow spots. The contrast between the spots and the rest of the shell will be strong enough if we use isochromatic plates, but what shall we use as a background for the dark colored animal himself? A white pocket handkerchief you say? Yes, that's not so bad, but it would be better to have something natural. There's the very thing; that white birch stump lying in the water. Set him on that; it's just the kind of thing he would be apt to rest on himself. He's quite quiet now, but he has retired into his shell, and a photograph taken so would look lifeless at the best. Keep your hand on the bulb and wait until he reappears. Here he comes; the head first, then the legs; now's your chance. Just in time, too, for he was in the brook again in an instant.

In taking the photograph of any animal, one should I think, strive to get a picture which tells something about the subject,—a picture which illustrates, say some characteristic posture, movement or habit. One need not, of necessity, sacrifice the photographic or artistic value in order to do this. The picture may be photographically and artistically perfect and in addition have the instructive quality. For example a photograph of a dog scratching his ear with his hind foot is more instructive to the average person than one representing the animal standing still, as it gives definite information concerning a characteristic habit. Photographs of mounted specimens usually lack this quality. Characteristic attitudes, when attempted at all, are too often exaggerated or in some other way abnormal; they represent what the taxidermist thinks he remembers having seen. Of



A BLACK SNAKE. By E. H. Baynes.

course there are exceptions. Some taxidermists are naturalists as well. Mr. William T. Hornaday, for example, has observed animals so long and so closely, both at large and in confinement, that all of their ordinary attitudes are fixed in his mind, and he remembers them, with as much ease, as he would remember the shapes of the letters of the alphabet. But we are wandering from the brook.

By the way, frogs are rather interesting subjects and there are plenty of them here. Suppose we try that pickerel frog sitting on the top of the bank? But he evidently does not intend to pose, for he has dived gracefully into the water, and you can see him settling himself among the pebbles at the bottom. I'll poke him gently with this stick, and you watch where he goes. There he is; he has landed under the bank near the roots of the willow tree. If you'll lean over and catch him, I'll hold your coat-tails. Cup your right hand that you wont hurt him when you seize him, and you must move very quickly or he'll be off into the water again. That's right, bring him here,

PAINTED TURTLE. By E. H. Baynes.

IRIS. By L. B Baynes.

and we'll first mop him a little with a pocket handkerchief; so much water on his skin would cause awkward reflections. Now for a background. That moss would be all right, but his feet sink into it and we don't want to hide them. There's an old weather-beaten plank lying amongst that pile of drift wood, how would that do? Set the frog down, and then let him alter his position and he will assume a natural attitude. But he's more interested in his freedom than in photography, for he has leaped into the grass again. Well, patience is one of the essentials in animal photography, and now we have a chance to practise it. Catch him and bring him back and when your camera is focused, we will set him with his head away from the stream. He desires to get back to the water and the chances are he will turn around before he makes a leap. After turning he will probably pause for a moment to take his bearings and then will be your chance. Now, are you ready? Good! I think you got him, but he didn't pause long. In any case we must expect a fair percentage of spoiled plates in this work. All along the brook we shall see frogs of different kinds, splendid subjects, every one, if properly handled. There are green frogs, with small black spots on the back; brown frogs with rows of large dark-brown spots on back and sides, and most beautiful of all, the leopard frogs, with yellowish green bodies, marked with oval, yellow-margined spots of olive green. No receipt can be given for photographing these creatures in their native haunts; one must be guided somewhat by circumstances in every case. Even frogs of the same species differ greatly in disposition, and though one may prove refractory when you try to pose him, the next may act as though he sat to have his portrait taken regularly twice a week.

Did you notice something moving in the grass over yonder? Ha! ha! its a black snake, a good fighter and a good subject. But he'll run away if he gets a chance, so we shall have to surround him and drive him into a corner, and when he finds he can't escape he will stand at bay and take any number of fine positions. Now, we have him. See him coil quickly and strike at my foot when I hold it out to him. Focus on him and be ready to press the bulb when he coils again. Ready? Then I'll attract his attention and you can take him just as he is about to strike. What shall we do with him now? Why, well let him go; he is perfectly harmless, and does a great deal of good by helping to clear the fields of mice and insects.

But here we come to a point where the brook widens out into a pond.

and this very pond is full of subjects for the naturalist photographer from one year's end to another. In the spring the borders are blue with iris, and later there are water lilies, arrowhead, pickerel weed and a hundred other wild flowers. There are half a dozen painted turtles now on that half-sunken log, but they are too far out to get much of a picture without a very long focus camera. This is a famous place for muskrats too, but these creatures are so wary that it is extremely difficult to photograph them. Their winter houses are interesting subjects however, and there are nearly always two or three of them in this pond. They are made of leaves and moss and usually rise about three feet above the surface of the water. I obtained a photograph of one some time ago, by breaking the ice and wading out into the water up to my waist. It was very cold work and when I came out my feet were so numb that I could not feel the ground under me. But the picture was fairly satisfactory and I felt fully repaid for my trouble.

As an architect, the muskrat is but little behind the beaver, which he somewhat resembles in appearance. The little houses are made in the late autumn, and are used until the following spring. The rats collect their material on the shore and swim out with it in their mouths.

Muskrats houses never look more picturesque than in the winter, when their domes are capped with snow.

This kind of photography is not the most exciting, but it is usually full of interesting incidents, and when next you feel inclined for a quiet stroll with your camera I suggest that you take the little path through the woods, cross over on the fallen tree trunk, and follow the windings, of " a bit of a brook."

THE MUSK RATS' WINTER HOME. By E. H. Baynes

Faking in Photography

MORRIS BURKE PARKINSON.

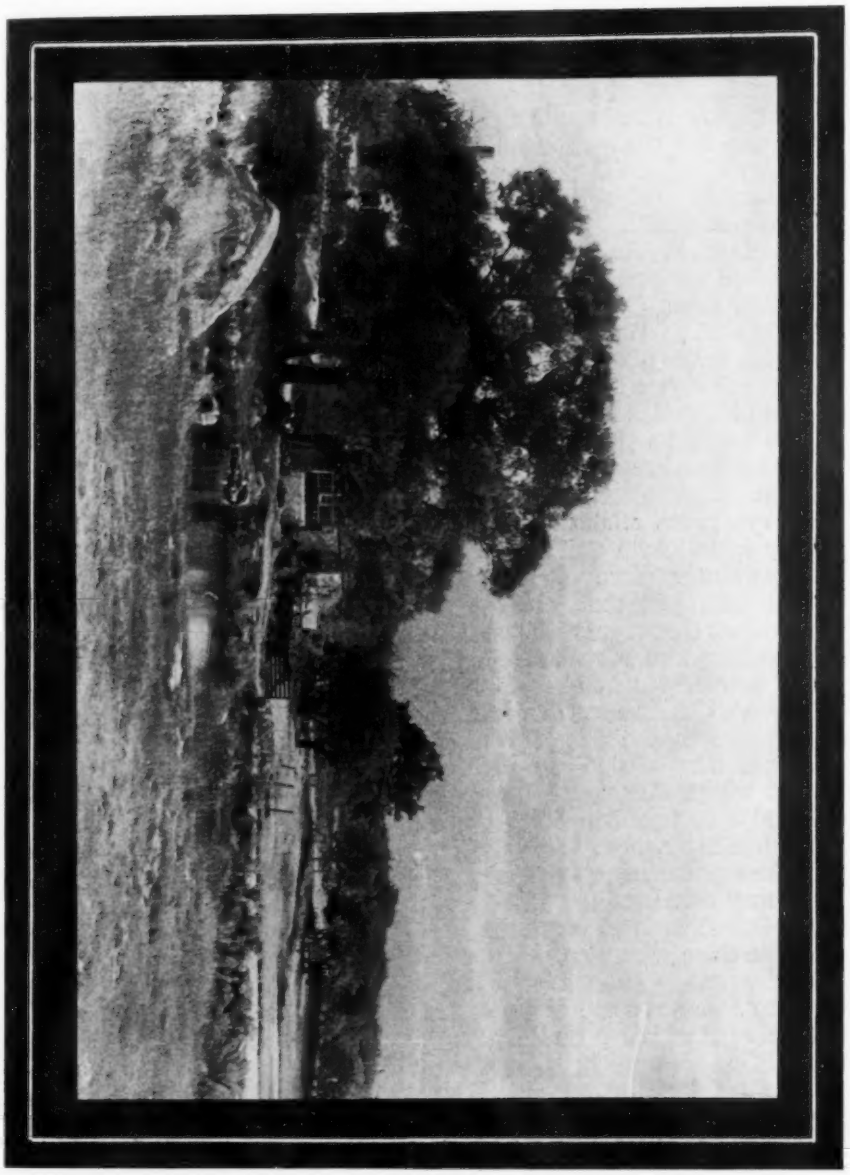
Being part of an address delivered before the National Photographers' Convention, at Buffalo, New York August, 8, 1902.

I noticed in a magazine not long ago these words employed by by an art critic who is credited with great knowledge in art and information in regard to matters photographic. He says, speaking to photographers, "You must remember that your means of expression, the camera, is simply a machine. It will make the wart on my lady's nose as clear and sharp as her beautiful eye. It has no conscience, no feeling, no sympathy. There is no variation in the camera's eyes, it sees everything equally well, and as a consequence, the interest is distributed all over the picture with the result that there is no special interest anywhere."

Now this important and almost fundamental statement struck me at once as strangely inaccurate. Every photographer has the means, and should employ then, of accentuating, by lighting and placing of accessories and backgrounds, the part of the picture to which he wishes to draw the eye by the centering of interest.

The very limitations of the lens he uses, if he diaphragm and focus it properly, will disprove the gentleman's statement? For example, under the conditions I have mentioned, in a bust portrait, the ears and hair will fall far below the nose, mouth and eyes in tone and in sharpness of delineation. True the wart on my lady may be as sharp as her nose, but, if it be a wart occupying a front seat, we may ask it to stay there. Should, we, or the lady; desire to have it removed, the knife and pencil, not to mention many other assistants, are ever at hand. This leads me to say a word about faking. This somewhat slangy word is coming to be very much employed by professional, amateur and also by painters. The professional employs the word and the process to some extent, but for the lack of time I think not so much as the amateur. The painter often seems to employ the word when applied to photography in derision. Show some painters a photograph and they straightway go nosing around the picture to see if they cannot find some place where they can safely risk the guess that that place is faked; their fundamental dogma seeming to be that a section faked is a section wrong. Once I saw a landscape photograph handed to a noted painter and looking at the great mass of clouds which monopolized two thirds of the picture, he said "the clouds are faked." On being informed that the clouds were untouched, with the very slight exception of two or three little places over at one side of the picture where they appeared between the leaves and branches of a tree not larger than a pea, he said, "Well, I knew there was faking done somewhere." Now I believe in faking. I admire legitimate faking— successful,— faking that produces the results desired. That is one reason I love fine paintings. I contend painters to be the greatest fakirs on earth and many of their fakings have been a great delight to me, I can assure you. Painters do not pretend to be literal in their representations of nature. Their very glory is in their impressionism, which is but another name for their faking. It would be as impossible as it would be undesirable for them to be literal. Supposing a painter

THE OAKS BY THE BROOK. By Conrad R. Hasse



THE OAKS BY THE BROOK. By Conrad R. Hasson.

should set out to make a landscape with the aim to draw, model and shade everything in it to a point of literal perfection. He must tarry over the light, shade and modeling of every triviality, every spear of grass and every leaf on the tree. This landscape must be so exact in literal perfection that it would disarm all criticism. When would he finish it? I will tell you — Not till after Macauley's New Zealander has from London Bridge gazed on the ruins of St. Paul's. No, not in a thousand years! And when finished, what would we have? Not so much, to satisfy the soul, as he gives us now when he holds up to our admiration gaze some giant of the forest without painting a leaf, or with one sweep of his skilled but faking brush he lays before us the broad stretch of some golden harvest fiield. They say that Millet painted many of his landscapes in his studio. I suppose nobody would claim that that exact and particular piece of harrowed ground with just that number of furrows, just that vegetation just that conformation, like a realistic photograph, ever existed in France — the one upon which he stood his prayerful peasants in the Angelus. And that little hazy village steeple, the tone of whose Angelus bell seems destined to be heard in fancy down the centuries by those who gaze on even the reproductions of that masterpiece, may have been dragged in, of some intruding tree removed to complete the composition.

Faking, too, in photography is not a failure because some microscopic examiner gets his eye on it and by some little difference in pigment or surface texture discovers it. You might as well say that my spotting a white spot out of a picture is bad because the original of the portrait,— who knew the white spot was there before, gets her eagle eye down to it and discovers, though she cannot see it a foot away, that something has been done there.

Now what is photographic faking, and I have been using this word not as slang but in its best sense? It is, if well done, simply improving the negative or the picture by any means in one's power. Some of us have been advised during the winter, by a well known painter, never to do it, if we do, we are out of our sphere and will surely fail. We must absolutely confine ourselves to what we can make the machine do— only this and nothing more. The painter says the camera sees too much, but advises the photographer to leave it all in. He wants to monopolize the privilege of modifying it to satisfy the artistic sense. In other words, he wants to do all the faking. We all know the camera sees more detail, every tuft of grass, every leaf and flower, than a glance of the human eye does. As what the camera sees in all its detail is the real thing, is really there, the product of the unassisted camera must be realistic, too realistic as I will try to show. As the eye sees less than the camera in detail, more in masses, then the eye-glance as compared with the camera must be to some extent idealistic; and as the picture printed in the brain by the eye glance is the picture we wish, and painters claim they wish to counterfeit in permanent pigment, who shall debar the photographer from modifying and softening the product of the almost more than realistic camera —by any manner of means in his power, be they what they may?

The picture should be judged on its merits, no matter how done. If it be half camera and half knife or pencil, it should be all the same, provided one can say " Behold the very form and mould of nature." I have seen an album of amateur productions, which bore to me the ear-marks of much after manipulation, that

were, partly for that reason, so beautiful that they would make the amateur of thirty years ago turn in his grave with envy.

It is the same in music. Its language is spiritual, not literal. What would be thought of a composer who would write a Pastoral and make his instruments give literal imitations of the bleating of sheep, the mooing of cows or even the song of birds, or the sighing of the wind in the trees? A Sousa or Gilmore may regale the denizens of Coney Island therewith, yet not without a blush when he so does. Yet there is a language in the true pastoral that to the ear attuned breathes the very spirit of all these things,—a cypher code as intelligible as was the message of his great achievement, though brought in dots and dashes to the great Marconi.

Then I say, if the almost microscopic camera produces a hard and wiry landscape and the artist, if only by a trick of printing, can bring it back to nature as his eye glances pictured the scene on his enthusiastic brain, even if by no more than the thickness of a skin of celluloid, why should we not say

"Fake on thou deep and dark blue sea of Photo-toilers,
Then thousand painters shall mock at thee in vain."

I remember some years ago of visiting the farm of Henry Ward Beecher near the Hudson. At one time I had my camera pointed westward from his piazza, over the velvet lawn, flashing between the blossomed apple trees, over the village, catching in the hazy distance the silver thread of that romantic stream that cuts the most magnificent hills of America as it rolls to the Metropolis and the sea. As I was taking in the scene, Beecher, the man who probably had thrilled more thousands with more extemporaneous poetry couched in in prose, than any other man who ever lived, put his head under the the cloth and said "If you could only take that scene just as it is on the ground glass!" I do remember my reply, but I might have said "Mr. Beecher, you in your poetic love of pictures would not be satisfied. It would be too realistic. Reduced to almost microscopic compass, you would not want a milllon objects dilineated in all their minutest detail — you are too much of an impressionist for that.

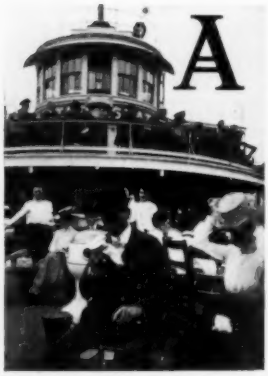
So let the fakir, whether amateur, professional or painter, take the falseness of ultra-realism and by this witchery of his we shall see it fading into the hazy but satisfying distance till it seems to our delighted gaze to be transmuted into the very form and likeness of not literal, but of spiritual and eternal truth.

THE ON LOOKERS. By P. Dubreuil.

The Falls of Niagara: A Photographic Problem

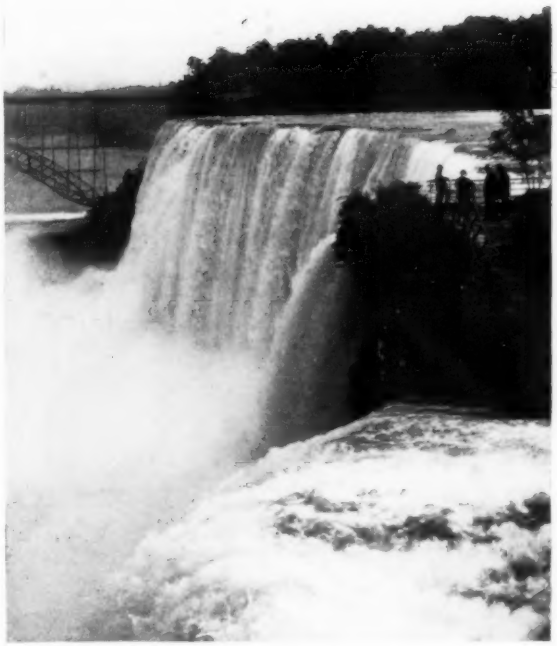
HUGO ERICHSEN, M. D.

With illustrations from Photographs of R. E. Knapp and the author.



AN inscription in an old book on Niagara Falls, that occupies an honored place on the shelves of my library, reveals the fact that I first visited the great cataract in 1868, at the age of eight I have no recollection of the event and do not know now what impressions were made upon me at the time, but I can vividly imagine, from subsequent experiences, how tedious the long railroad journey must have been and how glad my father and I probably were to escape its discomforts, to say nothing of its dangers, on reaching our destination. If my dear father were still alive and could have accompanied me on my recent trip from Detroit to Buffalo, on board of the "Western States," one of the palatial steamers of the Detroit and Buffalo Steamboat Company, he would have received an object lesson that would have impressed him more vividly with the progress made in transportation during the past decade than would reams of descriptive matter. All the comforts of modern life have been provided for, and the equipment and decoration of

RAPIDS ABOVE AMERICAN FALLS. By H. Erichsen.



AMERICAN FALLS, FROM GOAT ISLAND

the vessel are carried out regardless of expense. The grand salons are ornamented in ivory and gold, and present a magnificent sight when illuminated with electricity; they are only rivalled by the luxurious smoking-room finished in Oriental style. Tired mortals need not woo Morpheus, in the capacious staterooms, in order to enjoy much needed repose and to arrive in a refreshed condition at Buffalo in the morning.

I went to the Falls from Buffalo by way of the railroad and would advise my photographic friends to do likewise, as the trip by electric car takes about twice as long and is no cheaper.

Until last year, I did not know that Niagara Falls presented a photographic problem. Like many visitors to the Pan-American exposition, I stopped there on my way home and exposed the last two of the dozen of plates I had taken with me. As the day was cloudy, the sky being well covered, I used a full opening, with a shutter speed of what is commonly known as 1-50 of a second. Ordinarily this would have resulted in a normal exposure, but in this instance it produced a marked over-exposure, and, as I was not prepared for this, both plates were ruined. It then dawned upon me that the Falls would have to be treated like a marine

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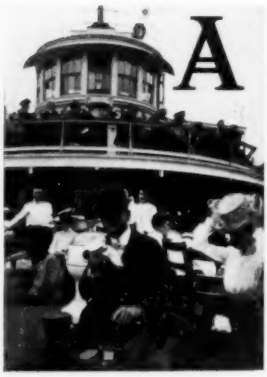

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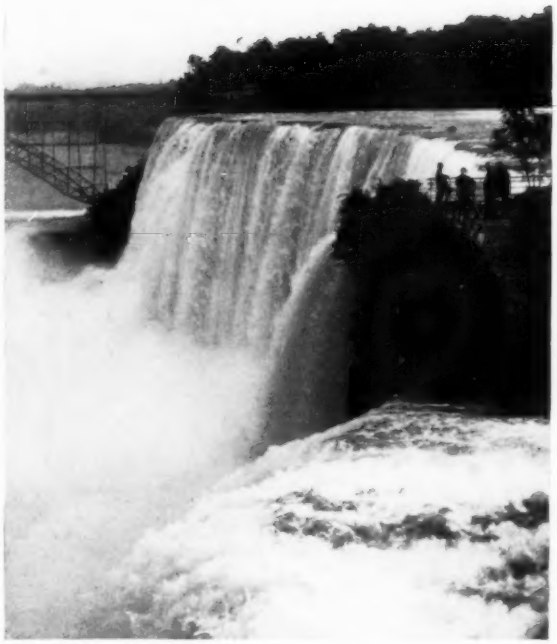

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subject—that is to say, that a high shutter speed and small stop were required to produce the best results.

This year, my attempt to get a good set of views of the Falls was frustrated by the cupidity of a clerk, to whom I entrusted the loading of my plate-holders and who palmed off a lot of old plates on me, although he knew that I intended to use the negatives I proposed to get for illustration. Out of ten negatives only one proved passable, after being subjected to general intensification and subsequent reduction of portions of the plate. Next time I go to Niagara Falls, I shall buy my plates of dealers at the cataract city and develop them on the spot.

But, despite my adverse experience, I am in a position to offer a few suggestions that will be of service to photographers visiting the Falls. In the first place I would advise a postponement of a visit until autumn, as it has been found that better views are obtainable in partly cloudy weather than in the glaring sunshine of summer. And, in order to catch some of the beautiful cloud effects, one should go provided with fast isochromatic plates.

Assuming that only a day will be spent at the Falls, I would recommend a trip on the picturesque Gorge Route in the morning, the first stop being made at the Whirlpool Rapids station. In the early hours of the day, the sunlight falling toward the swirling water illumines the rapids and shows them to the best advantage. It is also thrown on the wall of rock, on the opposite side of the gorge, but this is of little consequence. The exposure, being extremely short in order to catch the water in motion,

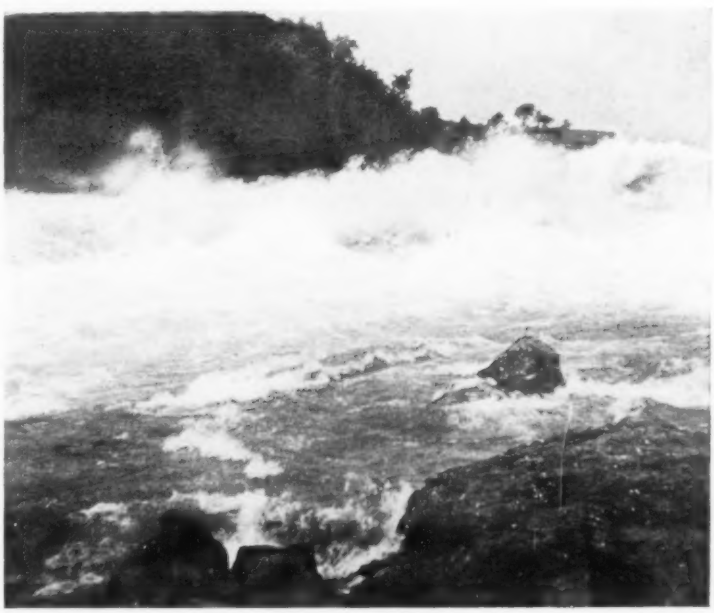
THE AMERICAN FALLS. By H. Ericksen.

excludes detail in the land. Steps lead down to a flat rock at the river's edge, whence a splendid view of the rapids may be obtained. The camera should be planted quite low, so as to increase the magnitude of the waves and spurts of water. I believe an exposure of one hundredth of a second (so-called, of course the real speed is less than that) with stop f16 will give results, although even then I should develop tentatively, using one or two drops of a 10 per cent potassium bromide solution to every ounce of developer, as a restrainer, and only resorting to a stronger developer if necessary.

The next stop I should make at the Horseshoe Falls, on the Canadian side. There is nothing worth photographing at either Lewiston or Queenston ; at least I could discover nothing.

After dinner, and a rest until about two o'clock, photographing may be resumed, as at that time the sunlight will fall in the direction of the cataract. That is to say, it may be resumed if the wind does not blow toward the Canadian shore. In the latter event, a fine spray obscures the falls and soon covers the lens-front, rendering photography out of the question. This spray is the great drawdack of a photographic trip to the falls and determines the exposures one may be able to make. During my recent visit it came down in showers upon the inclined-railway station, at the foot of the American falls, and rendered a position outside of that building untenable, unless one wanted to take a free bath.

There are days when the wind is "just right" and beats down the spray and mist upon the river, presenting a clear view of both cataracts. But in order to ensure the enjoyment of such an opportunity one would have to live at the falls. Of course, one might accidentally encounter such a day, but the chances are against it.



WHIRLPOOL RAPIDS. By H. Erichsen.

On the return journey to the city, I should stop off first at the platform right opposite the American falls, whence a good view of this cataract is obtainable. From here it is only a short walk to the new steel arch bridge, which, as the reproduction of Mr. R. E. Knapp's photograph shows, presents one of the most artistic views to be seen in the Niagara gorge.

Returning to the United States, by way of the bridge, I should first photograph the American falls from Prospect Point and then, if possible, from below. After crossing over to Goat island on one of the Reservation Park wagons, what is known as the first landing-place presents a view of the American falls that is worthy of reproduction. Luna island, and a part of the Horsehoe, are also noteworthy.

The last view of the trip may be taken from the new stone bridge leading from Goat island to the mainland, or from the shore, and comprises theAmerican rapids.

In taking views of the Falls I would advise the photographer to expose for the rocks, and to obtain the cataract effect in the water by reduction after development. Owing to the tremendous contrast between the falls and the rocks, it is difficult to obtain detail in the latter, and the above, I believe, is the only way in which it can be done. For the development of these exposures I would recommend a normal Pyro solution, with two or three drops of a 10 per cent potassium bromide solu ion restrainer to every four ounces of developer. Of course the quantity of the restrainer may have to be increased, and a dropper with the potassium bromide solution should be conveniently at hand.

I believe the above hints will save photographers, visiting Niagara Falls, from disappointment and help to solve a problem that has puzzled the man behind the camera for nearly half a century.

From the sublime to the ridiculous is only a short step — as is again demonstrated by some of the photographs on Main street, Niagara Falls, N. Y., showing numerous nobodies with their uncles, cousins and aunts grouped at the foot of either one of the great cataracts. Of course, the views are produced by double exposures.

NEW STEEL BRIDGE. By R. E. Knapp.

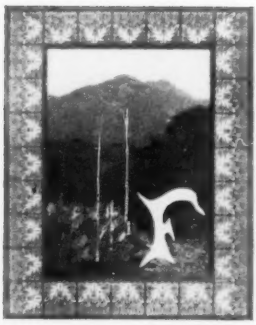
THE VAGABONDS. By H. A. LATIMER.

"We are two travellers, Roger and I.
Roger's my dog, come here you scamp."
. . . . . .
Five years we've tramped through wind and weather
And slep out doors when nights were cold.
And ate, and drank, and starved together.
Trowbridge.

The California Missions

SANTA BARBARA.

ALVIN LANGDON COBURN.



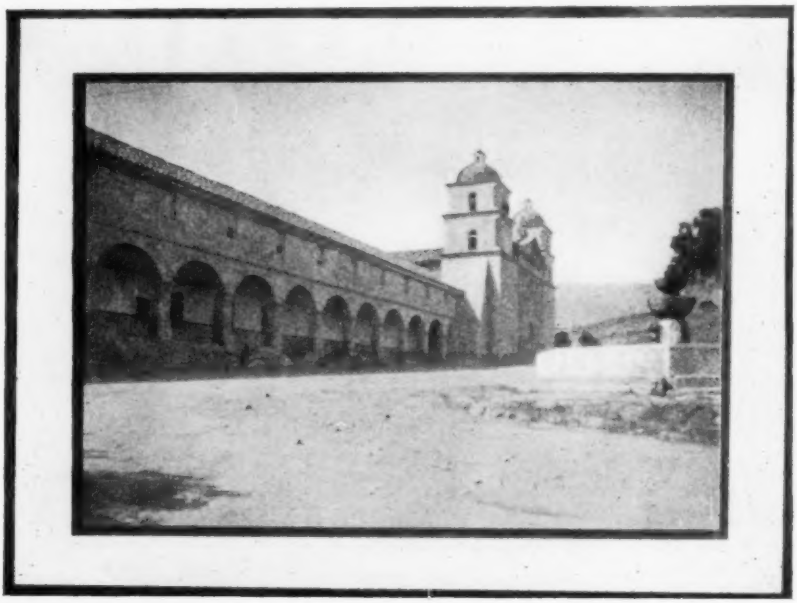
FOR more than a hundred years, in fact since its foundation in 1786, the Santa Barbara Mission has been occupied by the Franciscan Brotherhood, being the only one that has been so inhabited throughout its entire existence.

This mission is in a far better condition to be photographed than any of the others; for, it is almost exactly as it was when first built, all the restorations having been carried on with great care and with a view of not altering in any way the original style of its architecture.

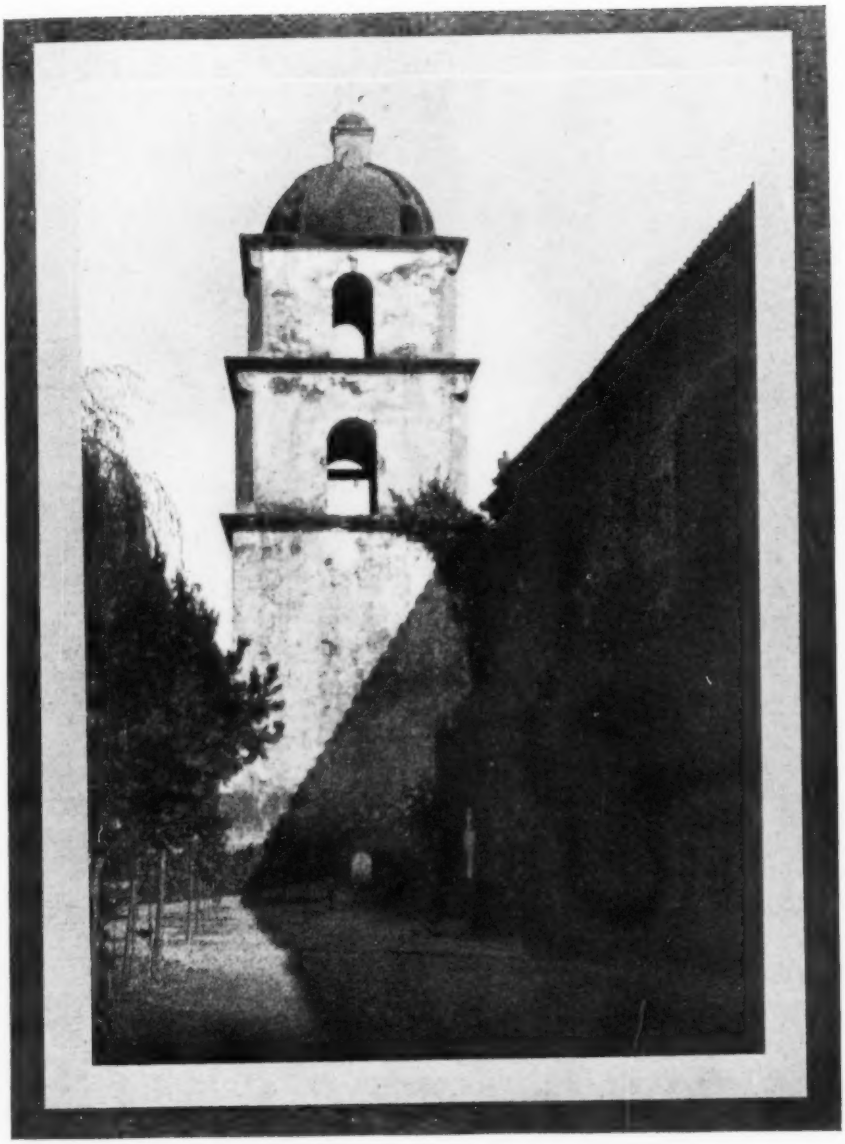
Situated as it is on quite an elevation above the city of Santa Barbara the view from the towers is one of great extent and beauty. But not offering much attraction for any camera except the panoramic, which instrument I unfortunately did not have with me, I was forced to do the best I could with the limited means at my command.

A great many trades and industries are now carried on by the Franciscans at the mission, such as the making of shoes, garments, and pottery, the printing of books, the baking of bread and many others, rendering them practically independent of the outside world.

The cultivation of the soil, farm-



GENERAL VIEW OF TOWER. By ALVIN L. COBURN.



NEARER VIEW OF TOWER. By Alvin L. Coburn.

ing and the raising of some of the most rare and beautiful trees it has ever been my fortune to see, are also part of their daily occupations.

Approaching the mission, from the city, the first sight of it discloses twin towers rising majestically above the surrounding foliage. But it is not until you are very close upon it that the general view here with reproduced is seen. The fountain on the right hand side is one of the oldest and most finely preserved in existence.

Strange as may seem and in great contrast to the age of the building it is now lighted throughout by electricity.

We will now enter the mission by the main entrance through the chapel, and thence go into the grave-yard adjoining, from which my second exposure was made. This grave-yard is a very ancient one, said to contain the bodies of five thousand persons of which three thousand were Indians. It is now all laid out in walks bordered with flowers and shrubbery. Passing now through a gate, in the rear, we have a full view of the acres of land cultivated by the brothers, many of whom are very skilful in such matters. The verdant fields look very beautiful in this country of almost perpetual summer. Inside the mission is the cloister, a very large square court open to the sky and surrounded by the mission buildings, which contains the many curious and beautiful trees and flowers already mentioned. Here again we have a fountain, although much more simple in design than the one outside.

In this garden of the fountain as, I am almost tempted to call it, one could easily spend hours and still find beauties to delight the eye. But there is so much to see that you must not tarry long here for it is sun set almost before you know it and time to start on the journey homeward.

In procuring the accompanying illustrations I am greatly indebted to the aid and courteous treatment that I received at the hands of the Superior of the Mission and a number of the brothers whom I now take the opportunity of thanking in this way. I left the mission with a feeling of mixed pleasure and regret — of pleasure at having seen a building that only existed in my imagination and of regret at having to leave so charming a spot, perhaps never to return.

INTERIOR COURT. By Avvin L. Cuburn.

"Through the village, down over the hill,
The road winds on to the East."

An "Old Home Week" Photographic Exhibition

HENRY LEWIS JOHNSON.

THOUGH kindred and friends are scattered and gone, scenes of childhood and youth forever retain their enticing charms, and beckon a welcome back through the intervening years. The ready adoption of Old Home Week in New Edgland is a notable movement, coincident with the wide spread return of interest in country life.

An escape is offered from narrow, artifical city life, with extraneous entertainment, to the invigorating freedom of the country, and wide open volume of the arts, music and languages of nature.

To study nature and to revel in her bounties has now become the aim of the vacationist.

The vast army of enthusiasts which the PHOTO ERA represents, the photographers who seek to preserve the beautiful to themselves and others find in the country their greatest opportunity. The delights of mountain, valley or woodland are later many times doubled because preserved in photographic records.

The village church, on the curb of the Common.
By MISS MARCIA EDES.

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The village church, on the curb of the Common.
By MISS MARCIA EDES.

By Henry Lewis Johnson.

"Come back to bayberry — scented slopes.
And fragrant fern, and ground — mat vine;
Breathe airs blown over holt and copse
Sweet with black birch and pine."

Whittier.

THE WOODED SHORES OF COLD POND.

The old homestead may now be occupied by strangers, but the familiar wayside and haunts of youth seem as dear and as intimate as ever. So in Old Home Week it is the places as well as the present day inhabitants that welcome the returning children.

It is pleasing to make note of a photographic exhibition held in the hill town of Acworth, N. H. during Old Home Week. For many generations, the town has sent forth her sons and daughters to careers of achievement and usefulness, and in recent years there has been an increasing number of those who return to find rest and vigor on her breezy hill-tops. Many have wandered with the camera over her hills and wooded roads and by her waterways catching and recording their glimpses into the heart of nature.

So it comes about that it was planned this summer to make a collective showing of town pictures in the Public Library. A moment's thought will prove how personal and delightful such an exhibition must be to the home-comer, as here and again some familiar spot is discovered marshalling up a flood of memories of old time days and associations.

At the close of the exhibition a selection of pictures will be presented to the Library as a nucleus of a photographic historical record such as has often been advocated by the PHOTO ERA, as the opportunity for photographers to serve the present and future.

This is but one of many similar opportunities in which photographers in nearly every town may serve the present future.

A collection of photographs of public buildings, town views, and well known spots, will always have great historic value, as time makes changes.

The recent proposal which is re-

THE BROAD COMMON, SKIRTED BY VILLAGE HOMES AND PUBLIC BUILDINGS.

ceiving wide endorsement for the establishment of Museums of Photographs in all the larger cities can be carried out in a similar manner by local photographers in nearly every community.

The example of the public library of Ackworth might be followed to advantage, by every town and city of the United States. Nearly a year ago, the editor of PHOTO ERA wrote that it seems strange that America had not imitated more extensively the work of the Royal Photographic Record Society of Great Britian, which had as its object the collection of photographs of places and buildings which possessed historical or other interest, and are in danger of future change. These photographs are deposited in the print room of the British Museum, where they are accessible to all who desire to use them, At a recent annual meeting, the president's address pointed out that it was impossible to say which photographs, of those they were gathering, would be of most interest or value a generation hence. But all would have a value. What is urgently required is, that a graphic current history of the country shall be formed. Many of the historical buildings in the United States are to-day of every flimsy construction. Every now and then one is destroyed and the memory of how it looked is gone forever. Lacking a national collection, every public library should collect permanent photographs of all places of historical interest in its vicinity. Two years ago such a collection was started at Harvard University, and among the photographs handed in were a series of the gates in the old fence, since demolished.

Every large city in the country has many historical monuments which should be photographed for a permanent collection. The PHOTO ERA desires to form a Photographic Record Association for New England, which shall make a collection of prints to be deposited in some public place, and invites its readers who would be willing to become members of such an association and help the work along, to send in their names. No financial obligation will be incurred thereby, and when a sufficient number respond, steps will be taken to incorporate the association,

DOWN THE "OLD ROAD." By MISS MARCIA EDES.

On the use of Different Oxidizing Agents to Destroy Hypo

A. and L. Lumière and Seyewetz.

IFFERENT substances have been employed to destroy hypo and to shorten the washing to which one must submit photographic plates and papers in order to remove the fixing agent. Until now the use of these substances in preference to other oxidizing agents had been justified only by very summary and hence inconclusive experiments. In order to determine what substances are most useful for the rapid elimination of hypo, we have examined the action of different oxidizers on this substance. With each of them we have studied :

1. The speed of oxidatlon of hypo, with various concentrations of oxidizer. We have used on one hand 10 ccm of a one per cent solution of the oxidizer, and on the other 2 ccm of a five per cent solution, and have mixed each with 10 ccm of decinormal hypo. In both cases we have titrated the quantity of hypo oxidized at the end of the same time. We have titrated this with a twentieth-normal iodine solution added to the mixture of hypo and oxidizer with starch until a permanent blue color is formed.

2. The influence of excess of oxidizer upon speed of oxidation for the same degree of dilution. We have added various quantities of the same oxidizer to 10ccm of decinormal hypo, and titrated as before after the same time.

3. The influence, in certain cases, of the acid, neutral, or alkaline reaction of the surroundings. We have compared the results of titration with iodine after using the oxidizer in neutral, acid or alkaline solution.

4. The action of the oxidizer upon the silver image. Hypo eliminators can be used practically only if they are without action upon the silver image. It is then indispensable to ascertain what are the oxidizers which do not exercise this action. To this end, we have soaked for five minutes prints upon citrate paper, as well as positives upon plates, in the solutions to be tested. We have varied the dilution of these solutions from 1 : 100 to 1 : 10000, considering this last dilution as a limit beyond which the oxidation is too slow to permit practical elimination of hypo.

The various substances upon which we have experimented are as follows : iodine water, bromine water, iodic acid, alkaline iodates, alkaline hypochlorites, chlorates and perchlorates, ammonium persulphate, potassium percarbonate, sodium peroxide, hydrogen peroxide, chronic acid, alkaline bichromates and potassium permanganate. We have also tried the action of alkaline iodides and bromides, with or without potassium carbonate, also recommended for the elimination of hypo, but have found no action, as might have been predicted.

1. IODINE WATER.— The use of iodine water as a hypo eliminator has been long recommended by various writers. Its oxidizing action is immediate, and the hypo while decoloring the iodine is changed, as is known, to tetrathionate of sodium. Iodine, instantly oxidizing hypo,

whatever the degree of dilution of its solution, would be a good eliminator of it did not act upon the silver image, but it always tends to form silver iodide. We have found that even very dilute solutions (one ten-thousandth), exercise a very apparent action upon prints on citrate paper. This inconvenience must cause the rejection of iodine water ; besides, the formation of tetrathionate of soda throws doubt upon the stability of the oxidation product of the hypo.

2. Bromine water. — Bromine water does not oxidize hypo as rapidly as iodine water ; it has the same inconvenience of action on the silver image ; besides, it has a disagreeable odor and irritates the respiratory organs. Its use is therefore of no interest.

3. Iodic acid. — Iodic acid instantly oxidzes hyyo ; all its elements concur to effect this oxidation. Its oxygen transforms the hypo to sulphate, with liberation of iodine ; this last body transforms into tetrathionate the hypo which has not entered into the first part of the reaction for lack of iodic acid. Although gifted with a considerable oxidizing power, this substance cannot be used to eliminate hypo ; it has the same defects as iodine, since this body is liberated in the first stage of oxidation.

4. Alkaline Iodates. — One might think, a priori, that the iodates would behave like iodic acid ; but we have found that they exert no oxidizing action upon hypo at ordinary temperatures.

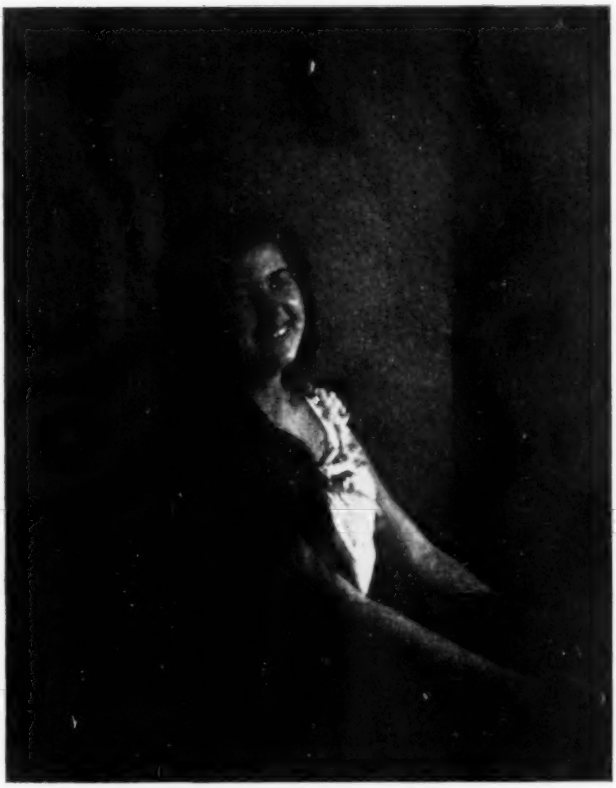
5. Chlorates and Perchlorates.—Chlorates and perchlorates do not possess, according to our trials, the property of oxidizing hypo in the cold. They are thus without interest for this study.

6. Hypochlorites. — Alkaline hypochlorites exert quite a rapid oxidizing action upon hypo, much more rapid than those of the alkaline earths. In no case is the action immediate ; the rapidity increases with the concentration of the solution, and decreases very rapidly with dilution. Hypochlorites very strongly attack the silver image as well as the gelatine, and with a very dilute solution this action on citrate papers is still apparent. Hypochlorites cannot then be used to eliminate hypo.

7. Sodium peroxide. — Sodium peroxide, even in concentrated solution, oxidizes hypo very slowly. The rapidity of oxidation is nevertheless proportional to the concentration of the solution. On account of its causticity this body attacks gelatine ; to be able to destroy hypo, it must be employed at such a degree of concentration that it exerts its disintegrating effect upon the gelatine of papers. It cannot then be practically used to remove hypo.

8. Hydrogen peroxide.—Hydrogen peroxide, even in dilute solution, rapidly oxidizes hypo. This oxidizer does not attack the image at all, and has no destructive action upon gelatine. It is then an excellent eliminator. But its practical use has divers disadvantages. Commercial aqueous solutions of hydrogen peroxide contain, in a great volume only, a small quantity of active oxygen. Besides, this solution lacks stability.

9. Chromic acid and potassium bichromate.— Chromic acid or potassium bichromate, with the addition of sulphuric acid, rapidly oxidizes hypo. With chromic acid the reaction takes place without precipitation of chromic oxide ; there is found perhaps chromate and basic chromic sulphate. Chromic oxide is however precipitated when the solution is boiled. Neutral potassium chromate appears to exert no appreciable oxidizing action on hypo. As to bichromates, they oxidize hypo very slowly. Bichomates to which have been added sulphuric or chromic acid cannot be used, for even in very



GOOD NATURE. By PHILIP A. HUTCHINS.

dilute solution, they attack the silver image. In the absence of acid, they have no action upon the image. They could then be used as hypo eliminators, but their oxidizing action is not rapid enough.

10. POTASSIUM PERMANGANATE. The oxidation of hypo by potassium permanganate occurs instantly with precipitation of manganese dioxide. In sulphuric acid solution, permanganate instantly transforms thiosulphuric acid to a mixture of sulphuric acid and dithionic acid. Even in alkaline solution it produces a very rapid oxidation. Despite these energetic oxidizing properties, permanganate in neutral, acid, or alkaline solution cannot be practically used to eliminate hypo, for its solution, even very dilute, always exerts a very manifest action upon the silver image.

11. POTASSIUM PERCARBONATE. The action of potassium percarbonate upon hypo is quite energetic. It occurs rapidly, but the oxygen of the percarbonate acts sensibly only during the process of solution, for this unstable body decomposes with liberation of oxygen when it is dissolved in water. It is then a good hypo eliminator, but its use presents some practical difficulties. It is necessary to dissolve it at the moment of use, otherwise it rapidly becomes inactive since it loses its oxygen. Do not prepare solutions in advance.

(To be continued.)

Grandpa makes further Revelations in Platinotypy

I AM not going to wait to see what Success you have had in making pictures out of Reversed Platinotype Prints, but after telling you one thing more about Reversed Printing which will certainly surprise you, I will give you the oposite process to that of our last Little Lesson. I am very glad indeed that your Papa puts all of the Awfully Hard parts into nice Little Words for you and hope that he will do it just once more, as I haven't time today, Between Naps, to write it all out Nicely for you. Maybe by next time there may have been a move or two on the Fuzzygraphic Chessboard, and if so, I may then have a word or two to say about that.

Besides, when I take that Nice Trip to Parree, I will write to you about the pretty Things that I see over there.

A USE FOR SPOILED PLATINOTYPE PAPER.

The Very Surprising Thing that I want to tell you this time is that you don't even have to throw away—yes, 'Wastebasket' it was all right—your Spoiled Platinotype Paper. P'raps you think that I am going to turn around and tell you how to make those Scat Pictures which give one the Cold Creeps and make one feel like selling out his entire photographic outfit for Ten Cents. No, you don't have to make those Dark as Egypt Things out of spoiled paper, so listen, as it is Very Curious;—when you find in the bottom of your trunk a box or two of paper which has seen one, two or three Destructive Summers, and that is in a proportionate condition of Decrepitude — get your Dictionary, Martin—take out a fairly good negative to start with, and place the paper carefully in the printing frame. The three-year old paper has become extremely brittle from the chemicals, and is a dirty-brown color. If placed in developer without exposure to light it will immediately turn a brown-black, so you see how useless it is to print and develop it by ordinary methods. I should have told you that, before beginning to print, you should place a piece of felt or a couple of pieces of blotting paper back of the printing paper, as the heat of the sun as well as the light affects the result. Print until a reversed or negative effect is obtained, which will be perhaps fifty times as long a time as normal printing with fresh paper, (although I have not counted) and, when ready, develop in a tray of water. A brownblack print of marked contrast is obtained, which should be washed in the muriatic bath say one to twenty instead of one to sixty as usual. Wash in water and mount very carefully on account of the brittleness which I mentioned. The result will be a harsh, brownish picture suited for some effects and the only advantages are variety and the using of worthless paper. If the paper is not very old, but simply beyond the point of freshness, you need not reverse the printing but print very deep, and use very weak developer, and you will obtain prints very well worth having.

TO OBTAIN DETAIL FROM A HARSH NEGATIVE.

Now I will have to answer your next question;—as to the best way of bringing all possible detail out of a harsh, contrasty negative. My last Lesson, and part of this, treat of Increasing the Contrast, and making flat negatives give contrasty prints; so this is quite the opposite process. You may all Guess how to diminish

contrast and increase detail, and after you are through Guessing, then I will tell you. Don't print your very contrasty negative until you can get full, strong, midday sunlight, and then print quickly and rather light. Yes, that is a Surpriser, to Underprint a contrasty negative. Then you get Mama's Saucepan,—and mind you wash it again before dinner is cooked —and make your saturated developer very hot, but not boiling, which makes bubbles on the paper, and sediment which causes streaks. The print will be a little bit brown, but I think the color an attractive one, and you will see for yourself how much you have increased your detail.

If you have any more questions to ask about platinotype printing, get them out, boys, as it is time to be putting up the Shutters.

Yes, to increase contrast from a very weak negative you should print in indirect light. The longer printing increases contrast, as well as the weakened developer.

HOW TO PRINT SNOW PICTURES.

You want to know, George, how to make the best prints from those bad, transparent snow negatives of last winter? You have been getting the snow dead white and the figures black, and all without detail? Yes, your Grandpa used to think those black and white things Great Stunts, some years ago. It is the same process as the last. Print very quickly in full sunlight, but Very Pale, so that you don't think that it will do at all. Then develop strong and hot, and you really will have a Snow Picture with detail in the snow and in the figures. You will certainly catch the Fuzzy Salon Napping if you send in that Kind of a Snow Stunt.

Yes Freddy, I think it's the Great Editor, who should send us the Fifty Cough Drops this time, if you keep writing out these Lessons for him, but tell him we'll take them in Real Money.

If it were not for that bad case of Photographic Indigestion caused by the Agitation kicked up by the very Fuzzy people, which I told you about two lessons ago, I would now be telling you how to Get Ready for the Real Photographic Salon. No, Martin, I do not think that the word is derived from 'Sally-Lun', even if that does cause Indigestion, too.

So, I hope you will have a lot of Pretty Pictures to show me next time. George, reach me my Nightcap, please.

Your Affectionate
GRANDPA.

P. S. Thank you for your French Pun, saying that I help you to make 'Grands Pas' in Photography.

P. S. Did you know that the Fuzzygraphic Quarterly, after dying a Natural Death, says that it is coming to life again? No, that isn't an Easy One, Freddy.

P. S. Yes, you can print your reversed platinotype paper too deep, beyond the negative, which developed in water will produce a print bad enough for any Fuzzy Salon.

Foreign Abstracts

Brilliant Bromide Prints. Prints and enlargements on bromide paper are often unsatisfactory, because they lack brilliancy. As long as they are wet they appear to be all right, but after drying they are no longer satisfactory. Alphonse Blanc (Bull. Soc. Franc. Phot., 1901:529) believes that gold toning of the pictures is the best way to obtain the desired brilliancy. His method, which works better, the higher the proportion of chloride to bromide in the film, may be used on any picture, no matter how long it has been made, especially if it has not been alumed. Alumed prints tone very slowly. The process requires two solutions which keep well.

1.	Water	100 ccm
	Potassium sulphocyanide	4 g
	Mercuric chloride	1 g
2.	Water	100 ccm
	Gold chloride	1 g

A third solution is made by adding a few drops of 2 to about 10 ccm of 1, so that a very slight reddish precipitate exists. This must be made up only as used, as it soon loses its toning power. The washed print, after draining, is laid upon a glass plate and rubbed in all directions with a brush dipped in 3. The longer the toning, the more the color goes to blue-black. Toning complete, the print is passed through an alum bath. If the picture is now washed and dried, it still lacks brilliancy on account of the thin layer of silver chloride which covers it. Therefore we pass it quickly through a fourth bath of 1 g of hypo and 1 g of red prussiate of potassium in 100 ccm of water. To prevent yellowing of the whites, the print must go through this bath rapidly and then be immersed in a large quantity of water and washed as ordinarily.

Toning of Bromide Prints. According to Rothenfusser, in Phot. Rundschau, 1902: 91, the toning of bromide prints in various shades of red, brown and blue can be accomplished by different mixtures of these four solutions:

A.	Uranium nitrate	10 per cent.
B.	Red prussiate of potash	20 " "
C.	Ferric chloride	20 " "
D.	Iron ammonium citrate	10 " "

For cold sepia to red-brown:

B	5 ccm
A	20 ccm
Glacial acetic acid	30 ccm
Pure water	250 ccm

For warm sepia to brownish red:

B	10 ccm
A	20 ccm
Glacial acetic acid	25 ccm
Pure water	200 ccm

For red:

B	10 ccm
A	10 ccm
Glacial acetic acid	25 ccm
Pure water	200 ccm

For blue directly either:

C	10 ccm
A	5 ccm
Glacial acetic acid	20 ccm
Pure water	170 ccm

or:

B	5 ccm
D	10 ccm
Glacial acetic acid	20 ccm
Pure water	170 ccm

For blue green tone with:

B	6 ccm
A	10 ccm
Glacical acetic acid	10 ccm
Pure water	165 ccm

to dark sepia or red brown, wash with pure water and treat with:

C	12 ccm
Pure water	100 ccm

or treat the silver print directly with:

B	5 ccm
A	5 ccm
D	5 ccm
Glacial acetic acid	20 ccm
Pure water	170 ccm

The picture is then considerably intensified.

Is Photography Art?

BY ELBERT HUBBARD.

Address at the National Convention, Buffalo, N. Y.

I believe it was Emerson who once said that if you go to Europe and bring back much, it is because you took much with you. I might paraphrase that remark here this afternoon by saying that if you take much away from this hall to your homes it will be because you have brought much with you; but I congratulate myself this afternoon on the fact that I am addressing an audience that can fill in between the lines, that will understand a good many things that I leave unsaid, and that will put the very best possible construction upon my faltering words. If there is any moral in what I have to say to you this afternoon, you will have to get it on the wing.

There is an ancient and honorable conundrum to this effect: "Is Photography Art?" You should all respect this conundrum; it has done great service; it is old, venerable, deserving of respect! Coming in on the train this morning from the village of East Aurora a gentleman sitting behind me reached over and said, "I understand you are to address the Photographers?" And I said, "I am to have that honor." He said, "May I ask you a question?" I said I would be delighted to have him ask me a question. He says, "Is Photography art? I said, "My dear boy, art is a matter of haircut and neckties." But I am going to repeat that question seriously and sincerely this afternoon, and I am going to dispose of it once for all. Whether photography is art, or not, depends upon the photographer. Art is not a thing separate and apart; art is the beautiful way of doing things. And you will have art wherever you have the artist; and where the artist is, there art will come and make her home, with all things beautiful and true; and there she will stay; and after the artist is dead she will yet remain in the neighborhood for awhile; but finally she will go elsewhere. You will have art wherever the artist is.

In the beautiful town of East Aurora, where I have the honor of living, we have a photographer—we are not entirely in the back-woods you see—and a short time ago I picked up my copy of the village paper, the East Aurora, Blizzard There are two publications in East Aurora, the "Philistine", and the "Blizzard." And the Blizzard has ten times the circulation — in the town—that the "Philistine has—much more popular than the "Philistine". Half of the Blizzard is printed in Chicago—which is proof that it is all right! I picked up my copy of the "Blizzard", and I saw an advertisement there of the local photographer, a very excellent gentleman, indeed. He does not think much of me, but I think none the less of him on that account. There are lots of people who do not think much of me, but I tell them to be patient, and they will grow to it in time. I have nothing against this gentleman; I rather like him; but in this advertisement he proposed to take cabinet sized photographs 99 cents, and he said that if you did not have cash you could bring him cord-wood and Plymouth cockerels at 12 cents a pound! And so I gathered in three Plymouth cockerels—no difference where I got them — but I got them, and I took them up, and I had a dozen of those photographs made, a dozen pictures of myself; and when I took them down home my wife

thought they were pictures of Ali Baba! Ali Baba is my hired man, a man who has been with me twenty years—very excellent man. He has not traveled; he has not been to Buffalo for twelve years; but travel is not everything! He said the last time he came they charged him twenty-five cents for a dinner, and they didn't give him any pie—and he has never come back! But he is a very excellent man. My wife don't know whether those pictures were pictures of the old man, or of myself. I gave them to the old man, and he gave them out as pictures of himself!

My advice to you, gentlemen of this convention, is this, that if you want Plymouth cockerels it is quite unnecessary for you to pay for them in photographs at ninety-nine cents a dozen. Mr. Moses was out to see me yesterday, and I noticed that he had his eye on my hen roost; and I know that if Mr. Moses, or "Papa Camera", or Mr. Schervee, from Worcester, Mass., or Pirie McDonald—I know perfectly well if those gentlemen were to come to East Aurora and open up a photograph gallery they would never get their poultry by paying for it with photographs! They know a better way! It is a fine art, you know, gentlemen, to lift a hen off the roost without making her squawk! And I believe, from the way that Moses looked over my hen-roost, that he can do it!

Art is the expression of man's joy in his work. There are many kinds of art. I am going to encourage Moses to come to East Aurora. Moses is a very excellent man, indeed; I like him well, although there has been a family feud between us in long years agone,—a thousand years before Christ, you know, my ancestors and his ancestors had it out; but we have bridged the bloody chasm and shaken hands and now we are friends. Perhaps from my remarks gone before you will gather that I live in East Aurora—and that is no mistake! East Aurora is eighteen miles from Buffalo. Some one has said that East Aurora is not a place, not a locality, but East Aurora is a condition of mind. But East Aurora is a place, it is a locality; and I hope before you go 'way back to your homes that you will come out and see us at East Aurora. At East Aurora there is an institution called the "Roycroft Shop". I don't make any effort to conceal the fact that I have some relationship with the Roycroft Shop. I am not ashamed of my business; I like to talk about my business, I like to talk about my stuff; I am interested in my stuff, and I am interested in my business; and I believe that at the last, modesty is only egotism turned wrong side out. Now there are a good many points in every business that are very much alike, that we hold in common. I am not in business entirely for my health; but I get a good deal of enjoyment, a good deal of satisfaction out of my work. I am going to tell you a little about my work in hopes it will encourage you to come out and make us a little visit there at East Aurora.

The Crucible

IRREGULARITIES IN FORMULAS. Many difficulties beset the reader who attempts to make up solutions after the formulas published in photographic literature. One of these is the multiplicity of names attached to some chemicals. For instance, the names red prussiate of potash, and potassium ferricyanide are used indiscriminately for the same chemical; for another, we have recently seen formulas which called for common salt, chloride of sodium and muriate of soda; the latter name undoubtedly literally translated from a foreign paper by a man who was no chemist. Of course to the chemist and to the druggist all these names are perfectly intelligible, but they introduce a needless confusion in the mind of the amateur, who is often frightened by the apparent complexity of a formula and deterred from attempting to make it. The evident remedy is to use only the official name, that by which the substance is called in medical practice and by which it is known to druggists. This is almost always the chemical name. The common names, as blue vitriol, tartar emetic, etc., should be discarded.

We recently were consulted in a case where a developer formula, as published in the columns of a contemporary, gave results entirely different from those attributed to it by its author. Upon investigation it appeared that the formula had been translated from a German source, and the translator, knowing little German and less chemistry, had turned "Potasche", meaning carbonate of potassium, into potash, which is potassium hydrate or caustic potash. The result was that about twice the required equivalent of alkali was introduced, the plates were forced, aud the film and fingers both attacked by the strong alkali.

Another cause of confusion in the preparation of photographic solutions is the unscientific method of mixing required by the formula. An example is a recipe for gumozotype published last year. The author uses three solutions, copper sulphate, chrome alum and gum. Part of the gum solution is to be mixed with pigment, making a fourth; of this again one takes a part and mixes with it some of one of the other solutions, making the fifth; a part of this fifth mixture is to be treated with the other, making the sixth solution to be prepared. Only portions of the solutions made up are used and much needless work is involved. Undoubtedly this process is that gone through by the inventor in elaborating his process, but he should have given directions specifying the quantities required to make not more than two solutions, a gum mixture and a sensitizing agent. The materials used are not incompatible, and this could have been done without trouble, to the great economy of time and material for the amateur.

Another point where formulas are very commonly at fault is in the use of the term per cent. As there is much misapprehension as to the proper use of this term, it is worth while to dwell on it again, although it has been previously treated in these columns. A ten per cent solution, as the name signifies, is one which contains ten per cent of the required substance, that is, 100 g (not ccm) of solution contains 10 g of substance and 90 g of water; an x per cent solution contains x g of substance and (100-x) g of water, or is in the ratio x: (100-x). Many people seem to think that a ten per cent solution means 10 g of substance in 100 g of water, but this is not the case. Take for example the well-known gum solution for gum-bichromate printing This is usually stated as 40 per cent. Where numbers are given, some authors say 40 g of gum and 60 g of water, while others call for 40 g of gum and 100 g of water. This is a wide range of difference. It happens in this particular case that about the same results can be gotten with either strength of solution, but this is not always the case, and the chance of serious error is so great that the expression of formulas in percentage terms should be carefully avoided.

Another minor point in the writing of formulas is that solutions should always be made up to a definite volume. Instead of saying, so many grams of some substance are to be dissolved in 1000 ccm of water, the formula should call for solution in water and making up to 1000 ccm, as it is always doubtful whether a solution will shrink or increase in volume, and how much.

Natural Color Prints on Bromide Papers

HORSLEY HINTON.

ONE of our writers, who uses the non-de-plume of "Fountain Pen," says The Amateur Photographer, sends us a communication which, as he himself suggests, involves matters concerning which doubt must always exist, until the experimental stage is well over. Commenting on that which follows, we may point out that obtaining the three negatives for the heliochromatic triplet by a single exposure is not in itself a novelty, as the pioneer in three-colour work, Ducos du Hauron did this many years ago; at the same time it may be readily supposed that Dr. Grun, whose ingenuity and skill in the matter of fluid lenses, has been proved, has found some new device by which simultaneous exposure may be facilitated. A high-speed "red" plate is perhaps the advance which is most immediately needed in connection with simultaneous exposure. The problem of producing the three fundamental impressions on a single sheet of paper is an interesting one, and we shall await with interest such further particulars as shall enable us to judge how far Dr. Grun and his co-worker have solved the problem. Our readers may remember that M. Blanc, of Laval, obtained interesting results which fringe on this problem, and a note referring to somewhat parallel experiments by M. Gartner is to be found on p. 350 of The Amateur Photographer for May 3rd, 1901.

"Fountain Pen" writes:—

In the Camera Club the other afternoon I over-heard a conversation which (as it was evidently not intended to be private) I think may interest scientific readers of the A. P.; Dr. Grun (inventor of the much-discussed fluid lens) and certain other members of the Club were the speakers. The doctor was handing round a small picture — apparently a rather poorly printed oleo of a soldier in a red uniform. It was not an oleo, though, but a bromide print on glossy Rotograph paper. Dr. Grun and a friend have, it seems, discovered a new method of colour photography. To most folk the main point of interest about this method will be the fact that prints in natural colours can be made on ordinary commercial bromide paper. In the meantime, the details of the method are secret, until Dr. Grun and his assistant obtain their patents; but it may be hinted that the process consists of the exposure of three plates simultaneously in the camera, behind red, blue, and yellow screens. A bromide paper print is made behind these three negatives the piece of paper being dipped in the patent solutions between each printing. The process is (according to its inventor) simple enough to be worked by any amateur; and the remarkable thing is that colour pictures can be obtained instantaneously, thanks to the truly amazing speed of the Grun Lens. At no very distant date, we may therefore expect to see the ordinary show-case professional supplying his customers with a dozen natural-tint snapshots of themselves as easily as monochrome P. O. P.'s are turned out at present. Of course the great point of the new invention is that ordinary opaque prints (of some considerable commercial value) are producible, instead of only transparencies as heretofore in such methods as the Sanger Shepherd; but, needless to say, Dr. Grun's idea applies to transparencies too. With it, coloured cinematograph films are quite workable. The difficulty, in this process, is correct register in the three exposures. The paper, being wet, expands but this is obviated by a new device.

Notes and News.

LIST OF FORTHCOMIMG EXHIBITIONS. The Texas Photographers' Association, at San Antonio, September 30, October 1 and 2, 1902. M. L. Sanders, secretary, Waco, Texas.

Photographers' Association of Indiana, at Lake Winona, 1902.

The Photographers' Association of Virginia and North Carolina, at Danville, 1902. C. W. Enstler, secretary Danville. Va.

Northwestern Photographers' Association, at Minneapolis, 1902.

Photographers' Association of Kansas. at Emporia, September 16–18, 1902. P. H. Bauer, Secretary, Leavenworth, Kas.

The Photographers' Association of Oklahoma and Indian Territory, at Oklahoma City, 1902.

Photographers' Association of the Pacific Ncrthwest, at Tacoma, September 17, 18, 19 and 20, 1902. C. F. Plummer, secretary, Seattle, Wash.

The Royal Photographic Society of Great Britain—forty-seventh annual exhibition—29th September to 4th November, 1902, at new gallery, 121 Regent street, London, W.

The third Chicago Photographic Salon, at the Art Institute, Chicago, Ill. Dec. 16, 1902. to Jany. 4, 1903. Auspices of the Chicago Society of Amateur Photographers.

YOUTHS' COMPANION. The Youths' Companion Contest for 1902 is the seventh Annual Contest of this very successful publication, in which nearly forty thousand photographs have thus far been submitted from all parts of the globe. This year, a grand prize award of $100.00 and six graded awards aggregeting $225.00 will be given for the best photographs in which the human figure is the central point of interest. Three special awards of $25.00 each will be given first, for a group of pictures, secondly for the best landscape, and thirdly, for the best study from nature.

The conditions are easily complied with. The contributor should be an amateur, may send any number of prints, and they should be mounted singly, with description upon the back. Competition closes Nov. 1st 1902. The public exhibition will open Dec. 1st. in the beatiful exhibition hall of The Youth's Companion as Boston—to which the public are cordially invited.

SAN FRANCISCO. Kirk, Geary & Co., are offering an interesting, new, intensifying solution under the name of O. gilvie's "Motak." It is so easy to handle and the results are so satisfactory as to place "Motak" among the brightest conception's of the end of the century. The negative is immersed in the solution for a few seconds without previous preparation, and then washed for a few minutes. The intensification is even and bath is to be used repeatedly, which with the extremely simple manipulation, makes the new invention a very desireable addition to the chemical closet.

PRIZE COMPETITION. The C. P. Goerz international Prize Competion, $1500 in cash prizes or the equal in Goerz manfactures as preferred, is only for Photographs made with the Goerz Double Anestigmat Lenses. Any camera or shutter can be used except in Class 1 where the pictures must be made with the Goerz — Anschutz Folding Camera — or with the Goerz — Anschutz Focal Plane Shutter, and the Goerz Double Anastigmat fitted to any Camera. Particulars of this contest can be had in full by addressing a request to C. P. Goerz, 25 Union Sq. New York.

RALPH J. GOLSEN. One of the handsomest and most complete trade catalogues that we remember to have seen for some time is one from the house of Ralph J. Golsen of Chicago. It is made up of 275 pages of solid reading matter and is furnished with an exhaustive index at the close, so that it is easy to find at a moments' notice, anything that is published in the book. This house one of the oldest and most reliable photo supply stores in the West, is known and advertised as the "Greatest lens and outfit house in America." The new catalogue is commensulate with this claim and will be sent to any address upon request.

ROCHESTER OPTICAL CO. Perhaps one of the most striking exhibits at the recent National Photographer's convention in Buffalo, was the exhibit of cameras, and camera supplies shown by the Rochester Optical Co. It included the very latest patterns in cameras of every conceivable shape and size — and was a distinct acquisition to the manufacturers end of the exhibit.

The Round Robin Guild

Conducted by Elizabeth Flint Wade

(Any amateur photographer may belong by sending in their name and address.)

The melancholy poet bewailing in as many stanzas as the editor will buy, the passing of the summer, closes each with the refrain that,-

"Ther's nothing left 'cept ember."

Now September is the beginning of the most delightful part of the year, the "ember" part. It is the time when the year lights its autumnal fires which burn like beacon lights in every sentinel tree, and like gorgeous conflagrations on every wooded hill.

And, oh! amateur, it is just the time of the year for making those elusive pictures, wood interiors. The heavy greens have given place to a thousand tones of reds and yellows and grays and browns, the thinning foliage letting in just the right degree of light for woodland vistas, and orthochromatic plates will reproduce them, in exquisite tones of lights and shadows.

REFLECTIONS

Who does not love a "silvery visage in a watery glass?" One of the most picturesque of water views is where bits of the landscape are mirrored in the clear depths of some still pool whose smooth surface gives back an unbroken image. The ideal day for photographic reflections is when the wind is still and light clouds are drifting across the sky. When the sun is shining the flood of light on the surface of the water kills all reflection and makes halation.

The photographic tourist should improve every good opportunity for "reflection," but he should not attempt to reflect too much. It is much more satisfactory to embody the reflections of a bending willow with the tips of its long slender branches touching the surface of the water, than to attempt to reflect a forest whose masses of foliage show no detail in the picture, but leave everything to the imagination.

Perhaps the best subjects for reflection are the clouds at sunset or at sunrise. Sunset is mentioned first, not because the clouds are more beautiful at that time but because one is not so apt to be rambling about with a camera at break of day. If, however, one is enthusiastic enough to try the sunrise hours for cloud reflections or for water pictures he will be able to secure that "atmospheric effect" so much sought after in a photograph. The light mists rising from the earth in the morning are caught by the camera and embodied on the sensitive plate, "concealing yet revealing" objects through which they are seen. Fog like mist reflects the light and one can often take a picture on a foggy day, especially at the seashore, which will have that misty appearance so often represented in paintings.

The wet pavements of city streets often prove most picturesque "reflectors," a wide open lens and a quick plate being the two mediums by which to secure snap shots. The wet pavements at night also afford opportunities of unusual effects in night photography.

One may also reflect at home by using a mirror, but one must be careful not to reflect oneself and camera, as well as the subject. This can be avoided by placing the mirror at a slight angle. The multi-reflections are made by the use of two mirrors placed at oblique angles to each other and the subject is posed with his back toward the camera. A three-leaved "milliner's mirror" can be used for reflections and many curious effects may be obtained by even ordinary mirrors.

There lies before me as I write one of the most charming bits of reflection it has ever been my good fortune to see. At the right of the picture is a low stone wall from which a young willow thrusts itself over the still stream of water which apparently comes from "everywhere and is going on into the beyond." Across the stream in the middle distance are seen tall rushes and swamp grasses, while in the distance are the outlines of the hills. The stream flows sluggishly with scarcely a ripple. The time of year is "'cept ember" for the willow has lost some of its foliage. Its branches dip into the stream which give back a picture of its familiar neighbor. The rushes and grasses which border the further side are also duplicated in the water, on the surface of which drift lazily a few autumn leaves bound for some unknown offing.

It is only a "bit" but it is just the bit which every amateur longs for and should try to secure.

CHIAROSCURO

Doubtless you have all heard of the king who one day at dinner found every dish tasteless and insipid but was unable to tell the reason until his daughter,—who had doubtless attended cooking-school,—suggested that all the food lacked salt.

The fault with our photographs is that they lack something quite as essential to a picture as salt is to cooking, but which bears a much longer name,— they lack "chiaroscuro." "Chiaroscuro" is the term used by artists to designate the artistic gradations of lights and shadows in a picture. It is composed of two Italian words, one meaning light and the other meaning shadow or darkness. This combined word does not however mean light and dark or light and shadow. It means the art of representing light in shadow and shadow in light. In other words the parts of a picture in shadow must have the detail and clearness of those in light, and those in the light must have the softness and roundness of those in the shadow.

What the painter endeavors to secure in his picture is what the amateur should try to secure in his photograph, detail and clearness in the shadows and softness and roundness in the high-lights.

The majority of photographs are full of strong and unpleasant contrasts owing to the fact that when we expose for the shadows we over-expose the high-lights and exposing for the high-lights under-expose, the shadows Now,—

"For every evil under the sun,
There is a remedy or there is none.
If there is one, try and find it,
If there is none, never mind it."

Now there is a remedy for our patchy looking photographs and one has not to seek far in order to find it. It is in the proper management of the light by which we make out pictures.

The light out-of-doors comes from one source and therefore from one direction, so there can be no adjustment of the light itself, but the camera can be so placed that every object shall have its due proportion of light and shade. Then instead of choosing high noon for the making of pictures defer the pastime until evening.

"Evening shadows, long and slim,
Point to where the day has gone,"

or as has just been suggested, choose the time

"When the East with morn is red
And the birds are all awake."

Light is strongest at noon and faintest at sunrise and sunset. The intensity of light is greatest in June and least in December. White clouds increase the light, gray clouds lessen it. A partially cloudy day is the best for land and waterscapes where one wishes for artistic effects.

FILING FILMS

In the Round Robin Guild department of the January number of the PHOTO ERA directions were given for filing and storing negatives. Since its publication many letters have been received expressing the pleasure which has been given by the following of the plan for disposing of one's negatives in small and convenient quarters. Along with these letters have come others from amateurs who use films, asking for as practical a way for storing and indexing films. My films are stored in rather a unique way which after much experimenting I have found to be the easiest and most convenient. It necessitates a visit to the paper warehouse where one buys stock of about the weight of the ordinary post card. This stock is to be cut up into six sizes beginning with a size 5 1-2 inches by 6 1-2 inches and decreasing by the half inch until the smallest size is 4 by 5 1-2. The number of cards of each size depends on the number of films one possesses or is likely to possess within a reasonable time. As far as the expense goes one could buy a hundred of each size as cheaply as half that number. That would give storage capacity for five hundred films.

In one side of each card, the side that measures 5 1-2 inches, is cut a small thumb-hole.

Take six of the cards, one of each size, and lay them one over the other, the largest one at the bottom and so on until the smallest card is on top, the thumb hole of course in the same relative position, and the edges of the cards placed evenly at the straight side of the five and one half inch. Having the cards placed evenly, take a strip of passepartout binding and bind the cards together at the sides and bottom. This little case holds five films, and the half inch space between each film leaves a place for the number and also for the name, both of which are recorded in the catalogue. I usually keep the films taken in one special locality by themselves, and write on the film case the name of the place or country.

After the cards are cut one can make up fifty or more cases in an evening and it is very pretty work too. When once arranged in this way films are quite as convenient of access as the glass negatives stored in their pigeon holes. If there is room on the margin of a negative for its number I usually scratch it in with a fine steel pin. It is then easily located when ready to return to the film case. At the upper right hand corner of each case is pasted its number in rather large type so that it is easily found. My film negatives are stored in pigeon holes in the same way as my glass negatives, but they may be kept in boxes the outside of which is properly labeled so that the negatives are easily found. In placing films in the case they are put in the film side toward

the card so there is no danger of scratching when packed or handled.

ANSWERS TO QUERIES.

Carl Sherwood. A bath to prevent frilling of films is made of sulphite of soda crystals, 1 oz. sulphuric acid 1-8 oz. ; chrome alum, powdered, 3-4 oz. ; water 8 oz. Dissolve and add it to a solution of hypo made of 8 oz. of hypo and 24 oz. of water. This bath may be used repeatedly until exhausted, as it does not discolor.

J. M. L. The brownish yellow spots on your negative may be removed by soaking the plate in a solution made of 12 grains of cyanide of potassium and 4 oz. of alcohol. After five or ten minutes soaking, take the plate up by a lifter and rub the places gently with a bit of surgeons', cotton dipped in the solution. Place for five minutes in clear alcohol, wash and dry. If the spots are not all removed repeat the operation.

Jennie. R. The materials for flashlights are very explosive and it is wiser to buy the ready prepared powders and use exactly according to the directions which accompany them. Flash light sheets are a good medium for making flash light pictures. They make little smoke and burn with a longer and steadier light than the powders.

F. Burt. Selt-toning papers are printing papers which do not have to be toned but are simply placed in a fixing bath. Water developed papers are first printed and then developed in water. The blue print paper is a water developed paper which requires no further treatment besides the washing. The water developed paper which is developed in hot water must be cleared by placing in a muriatic acid bath after developing in order to clear the whites. This paper does not require fixing in hypo. Full directions for working these papers accompany each package.

Barnard. Prints made on aristo paper may be fixed in an ordinary fixing bath for prints, proportion of one ounce of hypo to eight of water, then squeegeed on to a piece of ground glass to give them a rough matt surface. The tone is in some cases a golden brown, in others the print has a yellow brown tone.

K. Vernon. It is not necessary to use distilled water for making photographic solutions. Water that has been filtered through two thickness of filtering paper will be free enough from impurities for use in any ordinary solution.

H. L. O. See PHOTO ERA for January, 1902, the department of the Round Robin Guild for directions for making a case for storing negatives. The article also contains suggestions on indexing negatives.

Emily D. The reason why your prints, which were toned in a combined bath faded is probably owing to the fact that you used a bath weak in fixing properties. The combined bath after being used should have a little solution of hypo added to it to keep up the fixing quality as it becomes exhausted quickly.

George Webster. Citric and acetic acids are used for almost the same purposes in photography. Citric acid is considered superior to acetic acid. The acids are used to clear bromide prints that have been developed in ferrous oxalate developer.

B. L. T. To make a saturated solution dissolve as much of the chemical salt in the water as will be taken up. Unless using a hydrometer test, add enough of the chemical so that when the solution clears there will be a deposit on the bottom of the vessel. The clear liquid is the saturated solution.

James Andrew. Films are used for all purposes of photography with as good results as with glass plates. There is less danger of halation in using films than in using glass plates, the celluloid on which the sensitive solution is spread, not having as much reflection as on the glass plate.

Alice D. Plain salted paper is for sale by all dealers in photographic goods. Ask for freshly salted paper. Directions for salting paper will be given in the next number of the PHOTO ERA, Guild department.

Vassar. You need not be a subscriber to the PHOTO ERA in order to become a member of the Round Robin Guild. It is wiser however to take the magazine, as then you are sure of seeing every copy. Send fifteen cents to the mailing department of the PHOTO ERA and a copy of the November number containing the rules and privileges of the Guild will be mailed you.

C. D. W. An article on enlargements was published in the February, 1902 PHOTO ERA, in the department of the Round Robin Guild. A copy will be sent you on receipt of the price, fifteen cents.

Edna, B. K. Munson, and others. The article on how to use spoiled negatives and the formula for blue transparencies was published in the July number of the PHOTO ERA in this department.

B. H. K. A half-tone is a photographic process of making what are called "relief" plates for illustration. And is used for the direct reproduction of pnotographs and paintings. The plate is covered with a regular series of small dots raised slightly above the surface. The finer the dots the more delicate the picture. If you will examine a half-tone picture under the magnifying glass you will easily distinguish the dots made by the plate.

Announcement of the PHOTO ERA Exhibit for 1902

IN order to encourage, stimulate and develop the art of picture making, and to enable people to see more and more clearly the beautiful and picturesque in the every day scenes of life, the PHOTO ERA has decided to offer a series of cash prizes for the best pictures submitted in each of the following classes, viz.: Landscapes, Marines, Clouds, Portraits, Genre Studies and Architecture.

AWARDS

Six cash prizes of $10.00 each will be awarded for the best pictures in each of these classes, and a grand prize in addition will be given for the best set or group of photographs submitted in any or all these classes. This award will consist of a solid silver loving cup, beautifully wrought and lined with gold, valued at $50.00; to become the property of any contestant who wins the grand prize award two years in succession.

SPECIAL AWARDS

A special award will be given for the best set of Historical Pictures submitted before Nov. 1, 1902, which should be photographs of places and persons of general historic interest and not often photographed. The award in this class will be a cash prize of $10.00.

CONDITIONS

Competitors may send in as many prints as they wish, provided each exhibit has the following entry form cut from this magazine, and attached to the print.

Each print should be suitably mounted, and may be passe partouted, framed or unframed.

In no case will prints be returned unless stamps are affixed to the prints.

All prints to be eligible should reach this office before Nov. 1, 1902.

ANNUAL PHOTOGRAPHIC CONTEST

Exhibitor _____

Address _____

Title of Picture _____

Description: Time of day_____ Light_____ Lens_____

Stop_____ Exposure_____ Plate_____

Developer_____ Printing process_____

PHOTO ERA Contest_____ 1902.

PHOTO ERA

The American Journal of Photography

Published and copyrighted by the proprietor,
THE PHOTO ERA PUBLISHING COMPANY,
170 SUMMER ST., BOSTON, MASS.
10 SO. 18 STREET, PHILADELPHIA, PA.

THOS. HARRISON CUMMINGS, Editor.

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M. O. SAMPSON, WALTER ZIMMERMAN.
F. R. FRAPRIE. HERBERT W. TAYLOR.

Entered at Post-Office, Boston, as second-class matter.

Contributions relating to photography in any and all of its branches will be received for publication.

SUBSCRIPTION RATES.

The annual subscription in the United States, Canada, and Mexico, is $1.50
In other Countries within the Postal Union . 2.00
Always payable in advance.
Single copies 15 cents each

Advertising rates on application to the manager.

VOL. IX. SEPTEMBER, 1902. No. 3

SEPTEMBER.

The golden-rod is yellow,
The corn is turning brown,
The trees in apple orchards
With fruit are bending down.

The gentian's bluest fringes
Are curling in the sun,
In dusty pods the milkweed,
Its hidden silk has spun.

The sedges flaunt their harvest
In every meadow nook;
The asters by the brookside
Make asters in the brook.

From dewy lanes at morning
The grapes' sweet odors rise,
At noon the roads all flutter
With yellow butterflies.

By all these lovely tokens
September days are here,
With summer's best of weather,
And autumn's best of cheer.

Helen Hunt Jackson.

Character and Education. In this country we rightly pride ourselves upon our system of widespread popular education. We most emphatically do right to pride ourselves upon it. It is not merely of inestimable advantage to us; it lies at the root of our power of self-government. But it is not sufficient in itself. We must cultivate the mind; but it is not enough to cultivate only the mind; With education of the mind must go the spiritual teaching which will make us turn the trained intellect to good account. A man whose intellect has been educated while at the same time his moral education has been neglected, is only the more dangerous to the community because of the exceptional additional power which he has acquired. Surely what I am saying needs no proof, surely the mere statement of it is enough, that education must be education of the heart and conscience no less than of the mind. It is an admirable thing, a most necessary thing to have a sound body. It is an even better thing to have a sound mind. But infinitely better than either is it to have that, for the lack of which, neither sound mind nor body can atone, character, Character is in the long run the decisive factor in the life of individuals and nations alike.

— President Roosevelt.

We take pleasure in directing attention to the above because it is of vital importance to every man. Especially is it so to the photographer who aspires to be successful artistically. Character and character building are the handmaids to success, in picture making just as they are to success in every walk of life. No man can make ideal pictures until he has first thought and felt them, and, in a measure, lived these ideals in his own life.

New England Convention. The recent Convention of the Photographer's Association of New England just held in Boston was perhaps, the most successful ever held by that body. It represented the high water mark, in New England, of representative picture making and was full of artistic interest. Gathered together in Copley

Hall were pictures from every country of Europe as well as from individuals and local organizations all over the United States. They were ingeniously arranged in a series of cabinets round the hall formed by projecting screens and the scheme was excellent. It not only doubled the available wall space for the pictures but also, concentrated the visitor's attention upon limited areas. The central figure of this setting was President Chas. W. Hearn of the Photographer's Association of New England to whose untiring exertions the success of the Photographic salon was entirely due. We know that he has labored in the most systematic and unselfish manner, early and late, to achieve success—and the PHOTO ERA is glad to pay this tribute here to his generous services.

Another feature of this Convention which he planned and carried through successfully, was the practical demonstrations in the various studios about town which proved very popular with the convention.

On the whole, the results were ahead of any previous convention ever held before by this Association, which has now become the largest and most influential Photographers' state organization in the country and is second only to the National body in point of numbers. The proceedings are published in full by the PHOTO ERA and will be mailed to any address upon request.

Photo Era Contest. We desire to call special attention to our photographic contest which closes next month. Already a goodly number of entries have been made, but there is still room for more. All amateur photographers are invited to compete. Each contribution will be placed on exhibition, later. While the awards will be announced in a future issue of the PHOTO ERA.

You can send any package weighing 11-2 pounds or less by Express for 10 cents if prepaid. In order to get that rate ask to have your express shipment sent under section D express rules. This applies to Photos only, and not to prints or finished work.

Photography and Record Making. The camera has been used in many novel ways recently, and now Boston has the latest exhibit in this line. In the street cleaning department, a photographer is engaged in taking snap shots of loafing employes and presenting the photographs to the head of the department.

The town of Winchester, Mass, has adopted the system, of photographing the condition of roads needing repairs and of drainage situations which are unsatisfactory and making these pictures the basis of study for proposed improvements by the Selectmen.

When Prince Henry was sent to America last winter his imperial brother took care to dispatch with him an expert photographer, virtually as the historian of that official journey. Why is it not possible for the United States Government, in the same way, to place among the archives at Washington a series of negatives representing the attitudes and activities of each succeeding President?

National Convention. The success of the National Convention held at Buffalo, this year and reported elsewhere in this issue was followed by the public with the greatest interest — because the widespread development of amateur photography has now taken the art out the limits of a special calling and has, in a sense, made it the property of all.

This popularity of photography has acted beneficially on the photographer by profession. Because, owing to the great skill of the advanced amateur, the professional photographer's patrons have become his discerning critics and, to a certain extent, his rivals. The result has been to raise the standard of merit. Step by step, photography has advanced from the place of a trade to that of a fine art. But it has by no means attained its ultimate possibilities. Thousands watch its progress with keen attention, and many eagerly followed the discussions and suggestions incident to such a convention as the one just held in Buffalo, because of their personal interest in the progress of the art.

The Chicago Salon. The third Chicago salon will be held at Chicago from December 16, 1902, to January 4, 1903, with a prospect of its continuance to a later date. From the prospectus it appears that the jury of selection—five in number—have been nominated by the Art Institute, the Arts Club of Chicago, and the Chicago Society of Amateur Photographers, the two first named societies nominating two each and the photographic society nominating the fifth member of the jury. The exhibition will be held at the Art Institute, and the standard of admission will be one of art, rather than technical excellence, and a note of warning is sounded in the prospectus, which states: "Only such works as give evidence of individual artistic feeling, expressed in accordance with the canons of fine arts, will be accepted by the jury of selection. Dexterity of technique in the mechanical and chemical processes of photography will be considered, but it will be completely subordinate to that composite of imaginative, creative, and technical quality which is the essential of fine arts". There is no mistaking language of this sort, and the enterprise shown by the promoters of this the third Chicago Photographic Salon is sure to be rewarded with success. The decision of the Pennsylvania Academy of Fine Arts not to hold the Philadelphia Salon this year, gives the Chicago Society a clear field, and there is no reason why this proposed Exhibit should not mark a distinct epoch in the progress of photography in this country.

Pinholes in Negatives. We have recently received from a correspondent, F. M. Goodman Professor of Materia Medica and Botany at the University of Illinois, the following communication which we deem of sufficient interest to give Editorial mention, here since, it is a useful and valuable discovery.

Editor Photo Era:

Dear Sir. A short time ago believing that all my holders were empty, I proceeded in daylight to give them all a good dusting and wiping with a clean cloth: It so happened that one plate had been overlooked and as its presence was not suspected, it was exposed to the light of day and consequently ruined. Upon holding the plate up to the light, two small purplish spots were apparent; and wondering what they meant or might be, I placed the plate under a microscope and to my astonishment found the spots to be small circular masses of mycelium—a closely intertwined mass of minute vegetative threads of a mould.

Evidently the fungus had taken possession of the gelatine solution, while in the liquid state, followed by development, which we know readily occurs, as this is one of the substances which bacteriologists employ as a culture medium for the propagation of these cryptogamic fungi.

Upon thus learning the nature of these spots I became curious to know if they were our old-time offenders, and sure enough! Upon developing the plate there were two good sized "pin holes", and if the plate had been properly exposed and developed, it would have been one of the ruined ones, the loss of which is usually charged to particles of dust, bits of glass, etc.

One may readily see their presence is very liable if the gelatine solution employed is not used at once or properly filtered immediately before use.

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